

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>RCA 88250</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 97/ 22845</b>	International filing date (day/month/year) <b>15/12/1997</b>	(Earliest) Priority Date (day/month/year) <b>18/12/1996</b>
Applicant <b>THOMSON CONSUMER ELECTRONICS, INC. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (see Box I).
2. ☐ Unity of invention is lacking (see Box II).
3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing
- ☐ filed with the international application.
  - ☐ furnished by the applicant separately from the international application,
    - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
  - ☐ Transcribed by this Authority

4. With regard to the title, ☐ the text is approved as submitted by the applicant
- ☒ the text has been established by this Authority to read as follows:

**PARALLEL COMPRESSORS FOR RECOMPRESSION OF INTERLEAVED PIXEL DATA  
WITHIN AN MPEG DECODER**

5. With regard to the abstract,
- ☒ the text is approved as submitted by the applicant
  - ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. 1 ☒ as suggested by the applicant. ☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/22845

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 H04N7/50

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0 687 111 A (SICAN GMBH) 13 December 1995 see abstract see page 4, line 13 - page 5, line 2 see page 6, line 49 - page 7, line 23 see figure 5 ---	1-16
Y	EP 0 688 135 A (DAE WOO ELECTRONICS CO LTD) 20 December 1995 see abstract see column 2, line 44 - column 3, line 22 see column 4, line 7 - column 5, line 44 see figure 1 --- -/--	1-5, 8-15



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

16 April 1998

Date of mailing of the international search report

23/04/1998

Name and mailing address of the ISA

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Authorized officer

Hampson, F

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/22845

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,Y	US 5 675 424 A (PARK JONG SEOK) 7 October 1997 see abstract see column 5, line 12 - column 5, line 24 see figures 5,6 & KR 9 509 680 (25 August 1995) ---	1,4,6,7, 14-16
A	YASHIMA Y; SHIMIZU A; KOTERA H: "AN HDTV PARALLEL CODING METHOD BASED ON IMAGE DIVISION" PROCEEDINGS OF THE INTERNATIONAL WORKSHOP ON SIGNAL PROCESSING OF HDTV, VI, 26 - 28 October 1994, TURIN, ITALY, pages 489-501, XP002059592 see page 489, paragraph 2 - page 489, paragraph 3 ---	1,10,14
A	EP 0 687 112 A (MATSUSHITA ELECTRIC IND CO LTD) 13 December 1995 see abstract see column 11, line 30 - column 13, line 19 see figure 2 -----	1,10,14

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/22845

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0687111 A	13-12-95	DE 4419678 A DE 4436956 A CA 2151023 A	07-12-95 18-04-96 07-12-95
EP 0688135 A	20-12-95	CN 1126408 A JP 8009389 A US 5646690 A	10-07-96 12-01-96 08-07-97
US 5675424 A	07-10-97	KR 9509680 B	25-08-95
EP 0687112 A	13-12-95	JP 7336681 A JP 8084339 A	22-12-95 26-03-96

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

14 July 1998 (14.07.98)

International application No.

PCT/US97/22845

Applicant's or agent's file reference

RCA 88250

International filing date (day/month/year)

15 December 1997 (15.12.97)

Priority date (day/month/year)

18 December 1996 (18.12.96)

Applicant

KRANAWETTER, Greg, Alan et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

24 June 1998 (24.06.98)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

I. Britel

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

21 JAN 1999

PCT

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 88250	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (PCT/IPEA/416)
International application No. PCT/US97/22845	International filing date (day/month/year) 15/12/1997	Priority date (day/month/year) 18/12/1996
International Patent Classification (IPC) or national classification and IPC H04N7/50		
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 24/06/1998	Date of completion of this report 19. 01. 99
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0. Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Lockett, P Telephone No. (+49-89) 2399-8965 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US97/22845

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1,3-31 as originally filed

2,2a as received on 28/12/1998 with letter of 22/12/1998

**Claims, No.:**

1-17 as received on 28/12/1998 with letter of 22/12/1998

**Drawings, sheets:**

1/21-21/21 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.  
☒ claims Nos. 1-16.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US97/22845

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
  
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-16 are so unclear that no meaningful opinion could be formed (*specify*):  
  
**see separate sheet Item VIII**
- ☒ the claims, or said claims Nos. 1-16 are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**



**Re Item VII**

- 1 A system for reducing the memory requirements of an MPEG-video decoder is disclosed in e.g. EP-A- 0687111(D1). In this system input MPEG coded video signals are first decompressed and subsequently locally recompressed for intermediate storage to be available in subsequent processing stages. In subsequent processing a pair of parallel decompressors process respective data streams from the memory in which the locally recompressed video data are temporarily stored. In the independent claims of the present application, the main common distinguishing feature appears to relate to some unspecified form of plural local re-compressors in an MPEG decoder of this general type, without clearly specifying the relevant need for such a plurality or the data components (if any) of the input MPEG data stream to which the respective re-compressor stages are dedicated.
- 2 The independent claims are not cast in the two part form, Rule 6.3(b), PCT, with those features which in combination are part of the prior art (see document D1) being placed in the preamble. This is considered particularly appropriate in the present case as it is essential to the establishment of clarity in the independent claims in order to put any novel subject matter underlying the present application into its proper relationship w.r.t. the prior art known from e.g. (D1).
- 3 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein. To reflect the state of the art adequately in the description, the document D1 should be identified in the opening pages and the relevant background art disclosed therein should be briefly discussed.

**Re Item VIII**

- 4 The independent claims 1,10, and 14 do not find adequate technical support in the description as required by Article 6 PCT, since their scope is broader than justified by the description and drawings. The reasons therefor are that the main embodiments described in the body of the application, all concern detailed system

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US97/22845

design, whereas the terms of the independent claims are extremely vague and fail to give a clear definition of the novel contribution they are supposed to make to the prior art.

- 5 The independent claims are not considered to be clear contrary to the requirements of Article 6 PCT. The features of the independent claims which go beyond the disclosure of D1 (in as far as they can at present be understood - cf §§ 1 & 2 above) are set out in such vague and extremely broad terms that no meaningful technical interpretation which could inventively distinguish from the disclosure of D1 is possible.
- 6 The dependent claims are not in themselves capable of overcoming the obscurities identified in the respective independent claims since they do not go into sufficient detail concerning the points raised above. Because of this the clarity objection applies equally to each of the dependent claims.